

08/510,740



**UNITED STATES DEPARTMENT OF COMMERCE  
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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/510,740 08/02/95 CHEN

ECM1/0422

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EXAMINER  
MOISE, E

ART UNIT PAPER NUMBER

2006

DATE MAILED:  
04/22/96

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |                                                                                         |                                                                                   |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.                 | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/> _____                                                 |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-4 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 1-4 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Art Unit: 2306

1. 35 U.S.C. § 101 reads as follows:

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title".

2. Claims 1-4 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

Please see paragraph number 4 of the first Office action.

3. Applicant's arguments regarding the rejection of claims 1-4 under 35 U.S.C. § 101 have been fully considered but they are not deemed to be persuasive.

Applicant continues to argue that the step of "storing in said memory ..." renders the claim statutory.

In response to this argument, the examiner contends that claims 1-4 stand rejected under 35 U.S.C. § 101 due to the following:

As per claims 1-4, the newly added step of "storing in said memory ..." represents insignificant post-solution activity. The stored data representative of a signed magnitude quotient in the claimed storing step is a mere number that is not used to refine or limit other process steps. As stated in Abele:

If, however, the mathematical algorithm is merely presently presented and solved by the claimed invention, as was the case in Benson and Flook, and is not applied in any manner to physical elements or process steps, no amount of post-solution activity will render the claim statutory; nor is it saved by a preamble merely reciting the field of use of the mathematical algorithm.

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Also, as stated in Walker, 618 F. 2d at 770, 205 USPQ  
at 409:

If § 101 could be satisfied by the mere recordation of the results of a non-statutory process on some record medium, even the most unskilled patent draftsman could provide for such a step.

The courts have held that any non-essential "post solution" activity fails to render the claim statutory. See Parker v. Flook 198 USPQ 193, 197 (S Ct 1978). Many different types of insignificant post-solution activity have been dealt with by the courts: the transmission of data In re Castelet 195 USPQ 439, 446 (CCPA 1977), the display of the analog equivalent of a number (a shade of gray) In re Abele 214 USPQ at 688, and the updating of an alarm limit Parker v. Flook. Based upon the foregoing, the examiner concludes that the "storing" step in method claims 1-4 is nothing more than insignificant post-solution activity.

Even under the newly issued guidelines for examination procedures for computer-related inventions claims 1-4 fail to satisfy 35 U.S.C. § 101. The claims and the disclosure are directed to the solution of a mathematical problem. As noted in the guidelines, an invention that merely manipulates an abstract idea or solves a purely mathematical problem without any practical limitation is deemed non-statutory subject matter. The mere determination of an answer (quotient) and storing the same does not qualify as a practical limitation.

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Therefore, as mentioned in the previous Office actions, it is readily apparent that when claims 1-4 are each taken as a whole, the claims are directed to the preemption of a mathematical algorithm, and thus are non-statutory.

4. This is a continuation of applicant's earlier application S.N. 08/188,068. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds or art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See M.P.E.P. § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel L. Moise whose telephone number is (703)305-9763. The examiner can normally be reached on Monday through Thursday from 7:30AM to 6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy N. Envall, can be reached on (703)305-9706. The fax phone number for this Art Unit is (703)305-9724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)305-3800.



Emmanuel L. Moise  
Patent Examiner  
Art Unit 2306



Roy N. Envall, Jr.  
Supervisory Patent Examiner  
Art Unit 2306

March 30, 1996